

I claim:

1. A method of making a continuously chirped gain flattening filter in a single Bragg grating in an optical waveguide material , including the steps of:

- disposing a strongly chirped phase mask placed between a light beam and the optical waveguide material, the light beam being capable of changing the effective index of refraction of the optical waveguide material, and

- irradiating said optical waveguide material with said light beam non-uniformly through the phase mask, said irradiation producing a suitable filter response and required attenuation over the filter band.

2. A method as defined in claim 1 in which the light beam is an ultraviolet light beam.

3. A method as defined in claim 1 in which an amplitude mask is used to control the amount of light along the grating.

4. A method as defined in claim 1 in which a moveable slit is used to control the amount of light along the grating.

5. A method as defined in claim 1 in which the optical waveguide material is an optical fiber.

6. A method as defined in claim 1, further including the step of stabilizing said change in effective index of refraction in the optical waveguide material.

7. A method as defined in claim 6, wherein the step of stabilizing said change in effective index of refraction is produced by annealing the optical waveguide material.